NOTES FROM 05.04.05 PROTON DRIVER MEETING - CIVIL

Attendees: Bill Foster, Rich Stanek, John Reid, Chris Jensen, Bob Webber, Timergali Khabibouline, Dixon Bogert, Rod Walton, Lee Hammond, Duane Plant, Bob Ducar, Mike Andrews, Gary VanZandbergen, Chuck Federowicz, Elaine McCluskey

ITEMS DISCUSSED:

1. **Proposed Trench in Linac Gallery – drawing provided by Duane Plant. Proposed @ 2' x 2'**
    a. Hold cable tray for power distribution to equipment and wall panels: Cables would mostly be installed prior to equipment installation, therefore working in tight area not so much a concern. Coming out of trench to devices would be conduit (i.e., no bare cables). Would be similar to trench at MI60 in RF gallery. RF folks like it. Was useful for NuMI upgrade work. Agreed it's more expensive to install initially, but avoids embedments that could be sources of problems for cutting floor in future. Make visit to MI60 to see what's there.
    b. Hold piping for oil containment: containment needed for a "credible accident". Barry Fritz has been consulted by Duane Plant, and he believes this could be one rf station oil containment failure out of the 36 planned stations. This would be about 1000 gallons. (note, 6" pvc pipe for length of gallery would hold about 3000 gallons) Configuration would be a pipe from a tray under the equipment, that would lead to a collection pipe that would be horizontal in the trench. Concurred that checking on the pans is required to make sure pipes are not clogged with dirt and debris, therefore this becomes a maintenance item.
    c. Assume a short trench would also bring cables from outside substations to long trench. This would probably occur at each outside substation (every 540 ft) along gallery. Need to be sure trench can withstand load of forklift moving equipment.
    d. Trench would NOT contain low voltage cables – these normally are routed overhead in MI60 per John Reid.
    e. Desired to have cost differential between putting conduit under/in slab for distribution, and having it in trench in tray. FESS/E will pursue this.
2. **Oil containment in general**
    a. How does SNS handle this? Uses "environmentally friendly" oil (vegetable oil) in some equipment, and has pitched floor for unfriendly oil, which they dike if the oil is lost.
    b. Need to understand how our piped system would be drained in case of its use.
    c. Mike Andrews will do further work on documenting what a credible accident is.
3. **Debuncher Building L-42 and tunnel equipment below**
    a. Trying to determine how big this building is and whether the standard 8' x 10' transport line enclosure is sufficient. The building services equipment that is located in the straight section of the tunnel, not along the arcs.
    b. Equipment identified to be put in the building:
        i. Water skids for tunnel equipment
        ii. Power supplies for dipole and quad magnets (Dan Wolff) with racks taking up same space as that for one rf station in gallery
        iii. 1300 MHz Klystron (same orientation horz/vert as what will be in the gallery)
        iv. Spare klystron
        v. Water cooling for klystron – same as 2 tevatron skids – see F0 bldg for more info
        vi. Transformer like for std rf station in gallery
        vii. Modulator as for initial PD installation
        viii. HX skid
        ix. May need pumps for LCW (that comes from MI)
        x. Lifting equipment for klystrons
    c. Tunnel size – adequacy to be determined by layout of waveguide distribution – Timergali and John Reid to work on this.
4. **Updated site information**
    a. Beamline stakeout is partly completed – difficult through the woods. Want to put more permanent layout in place versus lath that's there now – tall pvc pipes
    b. Requisition is in process for wetland determination consultant – Patrick Engineering. COE visit for jurisdictional wetland determination still scheduled for June.
5. **Cryomodule length – determined to be 40 ft versus 60 ft per Bill**

ITEMS FOR NEXT MEETING:

Discussion of L-25 Center Building. Invite those who would be involved in installation and operation to provide input for this facility.

NEXT MEETING 5/11/05 AT 9:30 A.M. IN THE conFESSional WH5NE